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Worldwide Report

EPIDEMIOLOGY

No. 154



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INTER-AMERICAN AFFAIRS

BRIEFS

MALARIA STATISTICS--It has been reported at the meeting of health ministers and health directors of Central America and Panama that a total of 52,530 malaria cases were detected in El Salvador during 1978, representing an increase of 63 percent over 1977. An increase of 77 percent was reported for Guatemala. The cases recorded in Costa Rica and Panama were 313 and 263 respectively. There was a slight drop in malaria cases in Honduras and Nicaragua. [San Salvador LA PRENSA GRAFICA in Spanish 22 Jul 79 pp 3, 7 PA]

CSO: 5400

BURMA

BRIEFS

STARVATION AMONG KARENS--Dozens of the Karen hilltribes living along the Salween River in Burma opposite Mae Hong Son Province have died from malaria and starvation during this rainy season and they could not find medical supplies and foods from the outside world, a senior Karen Christian told the WORLD yesterday. The Karen Christian missionary who traveled to the Salween area in Burma said that several hundred Karens have built make-shift huts along the Salween River and many of them had crossed the border. [Text] [Bangkok WORLD in English 2 Aug 79 p 3 BK]

CSO: 5400

COLOMBIA

BRIEFS

YELLOW FEVER OUTBREAK--Valledupar, Colombia--A total of 17 people have died and approximately 100 have been stricken with yellow fever in several corregimientos of Rio de Oro municipality. The information was supplied by the inspector of San Martin, Jesus Romano, who has requested doctors and medicine from Cesar Department's health service to fight the outbreak of the disease. It was also reported that the disease is concentrated in Los Bagres Corregimiento. [Bogota Radio Satutenza Network in Spanish 1200 GMT 1 Aug 79 PA]

CSO: 5400

PREVENTIVE MEASURES AGAINST JAUNDICE REPORTED

Prague VECERNI PRAHA in Czech 25 Jul 79 p 3 AU

[Z. Vejvodova's interview with Doctor of General Medicine Josef Vondruska, deputy head of the Health Department of the National Committee in Prague--date and place of interview not given]

[Summary] Although the incidence of jaundice in Prague does not exceed last year's average figure, we are not underestimating the situation. We asked Doctor of General Medicine Josef Vondruska, deputy head of the Health Department of the National Committee in Prague, for some information.

Question: Experiences from other regions show that the jaundice affects, above all, children and the youth. What measures are you preparing for the time when the holidays are over?

Answer: "The leading personnel of the anti-epidemic staff of Prague health employees has undertaken, through Doctor of General Medicine Jiri Spurny, director of the National Health Institute, the first steps for examining all children returning to Prague from the afflicted areas before the beginning of the school year."

Question: Have any other measures in the sphere of hygiene been adopted?

Answer: "Doctor of General Medicine Jiri Sovina, director of the Health Office of the National Committee in Prague, has issued a ban on bathing in the Vltava River in the sector of the capital. The degree of chlorination of water in the other public bathing places and swimming pools has been increased. There is a possibility that the water of the Vltava might be contaminated by its tributaries (from waste water). This is why the regional Health Office in Central Bohemia has prohibited bathing in the Sazava and Vltava rivers in the sector of the Central Bohemia region."

Question: What about drinking water?

Answer: "It is absolutely unobjectionable. Moreover, the chief health officer of the National Committee in Prague has ordered increased chlorination of the Prague drinking water."

CSO: 5400

BRIEFS

JAUNDICE EPIDEMIC, TRAVEL RESTRICTION--Prague (ADN dispatch)--In the past few weeks a large number of jaundice cases have occurred, especially among children and teenagers. This has been reported by the CTK news agency from the Czech and Slovak Health Ministries. There have been no serious complications. The organs of the CSSR health service have taken all necessary steps for the treatment of the ill persons and for preventing a further spreading of the disease. For some affected regions, temporary restrictions have been imposed on group travel to the CSSR for Pioneer and holiday camps of children and teenagers up to 18 years of age. Organizations planning such travels in the GDR have been directly informed by their CSSR counterparts. Private and vocational travel is not affected by the restrictions. According to information released by the Czechoslovak health authorities, persons visiting Czechoslovakia need not take any special precautions apart from observing personal hygiene. [Text]
[East Berlin NEUES DEUTSCHLAND in German 18 Jul 79 p 2 AU]

CSO: 3400

INDIA

BRIEFS

CHOLERA EPIDEMIC—New Delhi, 11 Aug (AFP)—An epidemic of cholera has claimed 126 lives since last month in Bihar, including the eastern state's capital district of Patna, reports reaching here said. In all, 795 cases were reported in the state. The affected districts were Gaya, Nawadah, Nalanda and Rohtas, besides Patna. About 12 cholera cases were reported in the Aligarh Moslem University hostels in Uttar Pradesh State neighbouring Delhi last night. [Text] [Hong Kong AFP in English 1650 GMT 11 Aug 79 BK]

CSO: 5400

BRIEFS

BILHARZIA ERADICATION EFFORTS--Baghdad, 26 Jul 79--Intensified efforts by the nation's health organizations have been directed to the combating of bilharzia [schistosomiasis] in the rural parts of Iraq. Dr Sa'dun Khalifah, general director of preventive health, announced this saying that a joint plan that was drawn up in cooperation with the rural services agency has been completed for the eradication of this pernicious disease. He added that additional teams for this campaign which have already been formed have begun to administer its operations in the rural areas. The distribution of the therapeutic drug--which is administered in one dosage--has been completed to all the local health agencies for its use. Preventive efforts have been concentrated on school children in addition to those who have already contracted it at various degrees of seriousness. Dr Khalifah said that the increase in the number of water projects and their productivity have assisted in limiting the number of those stricken by bilharzia. He indicated that the directorate had prepared preliminary studies which attributed the incidence of bilharzia to a larval-state, enteric parasite found in rural areas. It also treated means for its treatment. [Text] [Baghdad AL-IRAQ in Arabic 26 Jul 79 p 4]

CSO: 5400

BRIEFS

DENGUE FEVER CASES--Kuala Lumpur, Wednesday--The number of dengue cases is on the rise although health authorities are coming down hard on public complacency towards Aedes mosquito breeding, a Health Ministry official said on 25 July. There were 254 cases of dengue fever and 223 cases of dengue haemorrhagic fever this year compared with 167 and 180 respectively over the same period last year. Johor, Perak, Selangor, Penang and the Federal Territory were the worst affected, showing an increase in cases of the more dangerous dengue haemorrhagic fever although the death rate for this was lower this year. [Excerpt] [Kuala Lumpur NEW STRAITS TIMES in English 26 Jul 79 p 7 BK]

CSO: 5400

INCIDENCE OF URINARY SCHISTOSOMIASIS, MALARIA NOTED

Nouakchott CHAAB in French 31 Jul 79 p 3

[Article: "Urinary Schistosomiasis, a Plague Threatening the Region of Assaba, Noted by a Team of Doctors"]

[Excerpts] This team's survey dealt primarily with urinary schistosomiasis, a very common disease in the eastern and south-eastern parts of the country, where it does a lot of damage. However, it was also interested in malaria, which is just as dangerous as the first, if not more so.

In the region of Assaba, 1,420 persons were studied. The incidence of infestation for this sample was 74.2 percent. In addition, 1 year's sample was studied for which the incidence of infestation amounted to 35.16 percent of the girls and 57 percent of the boys, with higher percentages for those between the ages of 12 and 14 in particular. It should be noted that the incidence of infestation is higher for boys than girls.

On the basis of the results of the study carried out in the region of Assaba, it becomes clear that urinary schistosomiasis constitutes a serious plague in this part of the country and that the town of Kankossa remains the most seriously affected. If the incidence of infestation is higher in boys than girls, this is explained by the fact that boys more often go down shirtless into infested ponds where the CNH [National Health Center] team was able to collect a large number of water snails belonging to the genus *Bulinus* of the Planorbida family, secondary hosts for urinary schistosomiasis.

As far as malaria is concerned, 900 blood samples were taken and are being examined at the CNH. But the National Health Center mission did not merely limit itself to malaria and schistosomiasis; it devoted itself to a detailed ophthalmological study as well, examining 888 infants, in whom 349 eye infections were able to be detected, or an incidence of 39.3 percent. Of these 349 cases, 328 or 94 percent, show acute damage.

In short, it is evident from this survey by CNH, which also carried out dental examinations, that malaria, urinary schistosomiasis, trachoma,

malnutrition, and dental cavities constitute as many public health problems that present themselves in this region and perhaps in others. As far as the medical mission is concerned, urinary schistosomiasis remains the most serious plague. Its seriousness is mainly due to the large number of pools of stagnant water in which the secondary hosts multiply vigorously and especially to the fact that the inhabitants who bathe all day long in these stagnant ponds are unaware of the risks involved.

9064

CSO: 5400

HANSEN'S DISEASE PARASITE ISOLATED

Mexico City EL DIA in Spanish 30 Jul 79 p 2

[Text] The isolation of Hansen's bacillus, the parasitic cause of leprosy, has already been accomplished in armadillos and in the feet of laboratory mice, it was reported by Dr Fernando Latapi, director general of the Ladislao Pascua Dermatological Center of the SSA [Secretariat of Health and Welfare].

During the symposium on "The Present Status of Knowledge About Leprosy" organized by the Tropical Disease Health Institute, he said that because of advances in medicine Mexico will soon become a nation free of cases of leprosy.

This disease affects only some 70,000 persons in our country and the states with the greatest number of cases are: Guanajuato, Michoacan, Jalisco, Queretaro, Sinaloa, Tamaulipas, Nuevo Leon, Coahuila, Colima, Yucatan, and the Federal District.

Dr Latapi said that of the total of people ill with leprosy, 73 percent are under supervision.

Specialists throughout the world say that leprosy is an ailment caused by parasites and is not contagious and that the various types of climate have absolutely nothing to do with its proliferation or contagion.

Treatment for it is with sulfones which are administered to the ill in suitable doses depending on the progress of the disease, and other medications are customarily used to control the disease.

8908

CSO: 5400

NICARAGUA

WIDESPREAD DISEASE ADDED TO OTHER PROBLEMS OF NATION

Paris AFP in Spanish 0012 GMT 29 Jul 79 PA

[Text] Managua, 28 Jul (AFP)--Nicaraguan Public Health Ministry officials disclosed here today that the destruction and bankruptcy caused by the civil war have now been joined by the first signs of epidemics, which are aggravated by the lack of medical and other health personnel. The unsanitary conditions in the lower class neighborhoods of the capital, which were the sites of violent fighting, have worsened. In other parts of the country, cases of malaria have increased geometrically and the excessive humidity caused by the rainy season has contributed to the spread of disease. Doctors at Managua's western hospital report that malaria accounts for two of every five outpatient cases treated daily. Parasitosis has spread among the thousands of fighters who participated in the guerrilla war, but the medical teams of the new Sandinist army have not been able to identify the parasite involved, which has prevented adequate treatment of the affected fighters. In large sections of the capital, garbage accumulated for weeks alongside the bodies of people killed in the fighting, and the interruption of the water supply caused great hygiene problems and led to the growth of insects which transmit infectious diseases.

In the course of the civil war, the National Guard took control of the hospitals in Managua and barred them to civilian patients. Only the Red Cross continued to treat civilians and from 7,000 to 10,000 of them registered at Red Cross emergency installations daily. It is estimated that apart from the sick, some 25,000 persons were wounded in the war and only some of them dared to seek medical assistance in the hospitals controlled by the army. At present, there are some 700 former national guardsmen and 350 Sandinist fighters with bullet wounds in the capital's 4 hospitals. Malnutrition among children, caused by the lack of proper food, is a problem whose real magnitude is unknown, but which is considered to be very serious. Only half of the hospitals' medical and nursing personnel have returned to work since activities were normalized in the capital. Public Health Ministry sources told AFP that the assistance of foreign doctors and health personnel is vital for the solution of these problems resulting from the civil war. A large group of Mexican doctors and nurses are working at the military hospital, while it has been announced that the Cuban Government will send hundreds of such personnel.

CSO: 5400

BRIEFS

NEW TYPHOID VACCINE--Islamabad, 2 Aug--A new vaccine using an indigenous strain of salmonella typhi, the main source of typhoid fever in the country, isolated at Armed Forces Institute of Pathology has been prepared by the National Health Laboratories, it was officially announced here today. A Pakistani scientist, Major General M. I. Burney, Director of the National Health Laboratories, carried out in batches the preliminary experiments on mice in 1970. After the initial experiments, Col Ashfaq Ahmed carried out controlled field trials covering a period of 4 years involving about 6,500 army subjects. The experiments on about 6,500 army recruits have proved that the new vaccine is almost two times more potent than one which is at present being prepared from U.K. strains. NHL have now plans to introduce this new typhoid vaccine for use in the country after obtaining clearance from chief of biologicals, World Health Organization headquarters, Geneva. --APP [Text] [Peshawar KHYBER MAIL in English 3 Aug 79 p 1]

CSO: 5400

PEOPLES REPUBLIC OF CHINA

BRIEFS

NEW ABNORMAL HEMOGLOBIN--Hohhot, August 5--A Chinese scientist at Baotou Medical College in the Nei Monggol Autonomous Region has identified two kinds of abnormal haemoglobin and has named them "NB Baotou haemoglobin" and "DB Baotou haemoglobin." Haemoglobin occurs in red blood cells and carries oxygen from the lungs to the rest of the body. Qin Wenbin, an associate professor at Baotou Medical College, began doing research on abnormal haemoglobin in the late 1950's. Working with several other specialists, he discovered four kinds of molecular hybrid haemoglobin which had been unknown in the world. The findings attracted the attention of specialists at home and abroad and promoted further research on haemoglobin in China. Such research has given a great impetus to investigations in many other fields, including molecular genetics, evolution, molecular medicine and anthropology. During the 1972-78 period, Qin Wenbin found a total of five abnormal haemoglobins, two of them were extracted from the blood of Mongolian people and one from the blood of Chuang people. In addition, Qin Wenbin has studied the relationship between diabetes and haemoglobin. [Text] [Beijing XINHUA in English 0701 GMT 5 Aug 79 OW]

CSO: 5400

SOUTH AFRICA

BRIEFS

BUBONIC PLAGUE REPORTED—Cape Town, July 25, (AFP)—Bubonic plague has broken out in the west of South Africa's Cape Province, a Health Ministry official disclosed here today. Writing in the ministry's bulletin, ecologist E. K. Hartwig attributed the reappearance of plague in the regions bordering Namibia to guerrilla war conditions there and the lack of regular health controls in neighbouring countries. Bubonic plague is transmitted by parasites affecting rodents living wild in the bush. Dr Hartwig said strict measures would be taken to prevent the isolated cases in Prieska, Calvinia, Willinston, Carnarvon, Bristow and Gordinia from becoming an epidemic. [Text] [Paris AFP in English 0944 GMT 25 Jul 79 NC]

CSO: 5400

TANZANIA

BRIEFS

CHOLERA QUARANTINE LIFTED--The department of health in Rukwa Region has announced that the cholera quarantine which was put into effect on the shores of Lake Tanganyika has now been lifted. Since the outbreak of cholera in Rukwa Region in August, 1978, there have been 91 deaths and another 500 people have been hospitalized as a result of this disease.
[Excerpts] [Dar es Salaam UHURU in Swahili 1 Aug 79 p 4]

CSO: 5400

BRIEFS

HYDATIDOSIS PREVENTION AGREEMENT--Minas (Special for EL DIA)--In Chief of Police Col Edmundo Sanchez' office and in the presence of Ret Col Mario S. Barbe, intendant of Lavalleja, an agreement was signed for the fight against hydatidosis in the entire department. Also present was Col Luis Guarino, president of the National Committee for the Fight Against Hydatidosis, thus making official Lavalleja's entry into the battle being waged against the disease. The meeting was also attended by other departmental authorities as well as by members of service clubs who will cooperate effectively in this urgent campaign. [Text] [Montevideo EL DIA in Spanish 23 Jun 79 p 10] 9204

CSO: 5400

VIETNAM

BRIEFS

HEMORRHAGIC FEVER CASES REPORTED--On 30 May 1979 the Vietnam-Cuba Hospital discovered the first three cases of hemorrhagic fever in Hanoi this year. Within twenty four hours the Municipal Preventive Medicine Station and Hoan Kiem Ward conducted an inspection to determine the density of hemorrhagic fever carrying mosquitoes and at the same time organized two insecticide spraying teams to kill mosquitoes in the Vietnam-Cuban Hospital and in the victim's neighborhood to prevent the spread of the disease. [Excerpt] [Hanoi HANOI MOI in Vietnamese 19 Jun 79 p 2]

CSO: 5400

BRIEFS

LIVE CATTLE BANNED--Despite the "distressing" news that no cattle will be exhibited at the Marandellas Show, the Show Society's chairman, Mr John Burl, expects it to be very well attended. The show opens to the public this morning, with judging and show jumping, which lasts until Sunday. The Minister of Commerce and Industry, Mr Ernest Bulle, officially opens the show on Saturday afternoon. Mr Burl said the absence of cattle, pigs and sheep on the hoof, because of the foot-and-mouth situation, was distressing. However, as with other shows, livestock had not been completely abandoned. Fatstock which would have been judged live will be slaughtered tomorrow morning by the Cold Storage Commission. The carcasses will then be judged on a points basis throughout the show season as part of the CSC's national carcass competition. Show committee member, Mr Brian Coulson, said there was more to interest black visitors, particularly in the home industries section and the physical training and boxing displays from residents in the Dombotomba area. Local exhibits include fire drills, gymnastics and drum majorette displays from Marandellas High School. [Text] [Salisbury THE HERALD in English 9 Aug 79 p 4]

CSO: 5400

STRICT CONTROLS SET FOR FMD VACCINATION CAMPAIGN

Montevideo FL DIA in Spanish 21 Jun 79 p 16

[Text] Present weather conditions and the condition of the fields and herds require the Public Health authorities, during this second vaccination period of the year, to place special emphasis on urging cattle owners and raisers to vaccinate their herds as soon as possible against foot-and-mouth disease.

Vaccinations May Be Performed Before 1 July.

The period established by current legislation is from 1 to 15 July but if the condition of the land on which the farm is located is such that to avoid future damage it is considered advisable to vaccinate the animals before 1 July this may be done and the proper authorities should be informed.

Among the criteria used by DILFA in making this eloquent call for immediate health measures against foot-and-mouth disease are the following:

The persistent drought and intense cold affecting the country have caused a marked reduction in the amount of fodder and the subsequent weakening of the livestock because of the scarcity of food. The predictable winter rain will create all sorts of difficulties in the movement of animals, men and vehicles in the country. If vaccinations are not immediately administered, before 1 July if conditions dictate it, or during the first part of the 1 to 15 July period, it might be that the inclemency of the weather and the subsequent bad condition of the ground will prevent vaccinations against foot-and-mouth disease from being administered. The animals would be exposed to risk, without the protection afforded by the vaccination, and would be in poor general condition because of malnutrition due to the scarcity of fodder.

Strict Direct Inspection

It is the Public Health authorities' most important duty, expressly provided by the current law, to act with the utmost efficiency to insure the cattle's immunity to the foot-and-mouth disease virus.

For this purpose, the general management of the Veterinary Service and DILFA have ordered the strictest direct inspection, establishment by establishment, to ascertain the actual performance of each cattle owner or raiser with regard to the foot-and-mouth disease vaccinations. All personnel that can be made available will be assigned to inspection duty. The previously mentioned inspection, to be carried out in each and every establishment, will be conducted starting when the Public Health authorities order it, and without prejudice to the inspection that will take place later on the basis of the analysis of the data gathered from the forms which, as in all vaccination periods, should be notarized by the distributors of vaccinations authorized by DILFA. DINACOSE number of buyer, trademark, serial number and quantity of vaccine sold, among other things, should be given.

Once the period has ended blood samples will be taken in certain market places and at the establishments, to test the immunity of the cattle, detecting in this way also the results and use of the vaccination.

The Time Limit Will Not Be Extended

It is especially emphasized that the legal period which has been established, 1 to 15 July, will not be extended. This will be inflexible because it is essential that vaccinations take place as soon as possible, as has been explained, in view of the worrisome circumstances stated and the obligation of providing timely and suitable protection to the basic wealth of the country, which the national cattle herds represent.

9204

CSO: 5400

BRIEFS

FOOT-AND-MOUTH OUTBREAK--The Ministry of Agriculture and Live-Stock today revealed an outbreak of goat foot-and-mouth in Mene Mauroa and Buchivacoa Districts, and confirmed that over 18,000 animals had died. The report, issued by Oriol Lopez Delmoral, head of the agriculture ministry in Falcon, states that the area affected by the epizootic had been declared in a state of emergency. A quarantine was ordered to prevent the disease from spreading to the areas surrounding Falcon State. The outbreak of foot-and-mouth disease and parasitosis has especially affected Casigua and San Felix municipalities, where it has been confirmed that some 18,000 goats have died of the terrible disease. [Text] [Caracas EL UNIVERSAL in Spanish 20 Jul 79 p 28]

CSO: 5400

YELLOW RUST ATTACKS WHEAT, BARLEY CROPS

Quito EL COMERCIO in Spanish 24 Jul 79 p 2

[Text] GUAYAQUIL, 23 July 79 The fearsome scourge "yellow rust" has caused great losses to wheat and barley crops in Canar province, according to reports.

It is not coffee rust, which affects coffee-trees and which has been discovered in Peru 120 kilometers from the Ecuadorean border.

The National Institute of Agriculture Research (INIAP) held a demonstration yesterday in the Sisil, El Tambo, and Honorato Vasquez sectors of Canar, showing material that has been chosen for grain production in that important region.

Technicians from that organization explained the different genetic characteristics of the seeds, especially for wheat and barley crops which are resistant to the fearsome "yellow rust" that has caused heavy losses in the crops of the domestic varieties in that region.

During the demonstration, which was held in turn in Sisil, El Tambo, and Honorato Vasquez, lists were made of the farmers who attended, in order to send them publications on the problem and to keep them in touch with the technicians of INIAP so that they can most easily achieve their goals, organizing groups of 30 people.

Transmission of the Disease

During the talks, those attending were told that many types of microorganisms cause grain diseases, which are easily transmitted from one place to another by wind or even by a man moving from one place to another, which happens with the so-called "rusts" and "smuts." This is what has occurred with the Canar Canton, ranging from about 50 percent in some cases to nearly 100 percent in others.

Genetic Research

Taking note of this serious problem, the National Institute for Agricultural Research has done genetic research to find varieties that are resistant to the disease, and now has the Dorada, Duchicela, and Teran barley varieties which are rust-resistant, according to the report.

PEOPLES REPUBLIC OF CHINA

BEIJING AREA USES WASPS TO CONTROL PESTS

Beijing XINHUA in English 0226 GMT 10 Aug 79 OW

[Text] Beijing, August 10 (XINHUA)--Trichogramma or parasitic wasps have just been released over a large area of farmland just outside Beijing, where it is planned to introduce the insects on a total of 80,000 hectares this year, one third of the maize acreage in the area.

Trichogramma are tiny insects less than one millimetre long that can be used to kill the maize borer, which lays eggs at this time. The female insects oviposit within the eggs of the maize borers and can eliminate from 70 to 90 percent of them.

Boxes or cardboard containers carrying trichogramma in the process of eclosion have been set in the maize fields on the outskirts of Beijing 20,000 to 30,000 trichogramma for each hectare of land. The land is surveyed and the effects recorded three or four days after these insects are unleashed. Trichogramma are released up to three times during the growing period of each generation of maize borers.

Since 1964, the adoption of methods such as spraying insecticides and steaming or burning the harvested maize stalks and cobs has by and large brought maize borers under control in the Beijing area.

In order to reduce the cost of farm production and alleviate pollution of pesticides, trichogramma were first introduced in Beijing's suburban area in 1974. They have been used in many other parts of China. With this method, more than 500 tons of pesticide was saved on Miyun County's 20,000 hectares of maize fields last year, and the cost for each hectare of land in pest control was less than half the cost with the application of pesticides.

Propagation centres for trichogramma have been set up in many counties and rural communes in the Beijing area. A semi-mechanized centre in Miyun County, manned by 18 technicians, can provide enough trichogramma for the control of maize borers in some 1,250 hectares of maize fields and of pine

moth in 625 hectares of pine woods. This centre uses tussah silkworm and grey rice moth eggs as the intermediate hosts for trichogramma, and its unhatched eggs are kept in an electric refrigerator.

Trichogramma are also being used by rural communes and state farms to control pests that plague fruit trees and timber. Moreover, research is under way to see if they can be utilized to control vegetable pests.

CSO: 5400

NEW CONTROL BEATS RICE STEM BORER

Manila PHILIPPINES DAILY EXPRESS in English 26 Jul 79 p 12

[Article by Ramiro C. Alvarez]

[Text] A tiny worm--less than a centimeter long--which feeds deep inside the stem of the rice plant now no longer poses a threat to palay crops.

Farm scientists have found a chemical that can flow from the roots into the veins of the rice plants, knocking off the worm but doing no harm to the plant.

Until this discovery, the worm, popularly known as rice stem borer, cuts down palay yields by as much as 20 to 70 cavans a hectare.

The national losses from stem borers have been placed at some 700,000 cavans of palay every year, in spite of extensive pest control schemes.

What made this small harmless-looking creature so destructive was its ability to bury deep inside the stem of the rice plant.

The borers are offspring of about an inch-long dainty moths (small butterflies) that flutter across growing rice crops from dusk to midnight making love to each other and laying eggs.

But, the male moths which are known to go more for virgin females like to mate at about seven to nine in the evening. Whatever the reason for the choice of this time is not known.

However, females lay their eggs also at night. Like most insects which are prolific, the moths of stem borer lay 50 to 80 eggs each night. Over its lifetime, they put down up to 200 eggs.

The eggs are lined on the tip of the leaves of rice plants. To keep off predators, they are covered with soft silky brown hair by the mother moths.

In about a week's time, these eggs hatch into ever-hungry worms. These stem borers first crawl towards the tip of the leaves, then slowly swing themselves on silvery silk strings down to the base of the rice plants.

For about a month, the borers eat the soft tissues inside the rice stems. Unconsciously, they also kill the rice stalks.

Stem borers reveal their presence in a rice field by the number of rice plants with "dead hearts" or "white heads"--empty pale panicles between the healthy ones.

Not until the borers are ready to curl down for a long sleep that they become harmless. In a week, these sleeping borers--pupa--become moths which will lay eggs again.

With the new systemic control, the insecticide not only seeps down into the heart of the rice plants but it keeps its poison up to 30 days. Sold in granular form, it is easy to apply on the soil.

To make this chemical more effective, the rice paddy is first filled with 3 to 5 centimeters deep of water. Dikes are sealed to prevent leakage.

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